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DIFFERENCES IN ORGANIZATIONAL PRACTICES  
AND PREFERENCES IN THE NAVY BY RACE

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Peer leadership						
Peer support						
Group process						
Satisfaction						
Job characteristics						
Steady job						
Good paying job						
Good fringe benefits						
Clean job						
Challenging job						
Prestigious job						
Friendly people						
Serve country well						
Control over personal life						

## ABSTRACT

### DIFFERENCES IN ORGANIZATIONAL PRACTICES AND PREFERENCES IN THE NAVY BY RACE

This study had as its major goal the investigation of differences in organizational practices, preferences, and felt racial discrimination by race and racial composition of work groups in the Navy. The findings indicate there is little evidence of differences in organizational practices by race, especially among Blacks and Whites who together comprise the racial mainstream of American life. However, differences do occur when the racial composition of work groups are investigated. Respondents in work groups with supervisor of the same race view the conditions in the organization better than do those whose supervisor is of a different race. These findings may be an indication that the racial configuration of the work group differentiates in the practices where race alone does not. There are differences in the organizational preferences by both race and the racial composition of work groups, with Blacks generally being more concerned about having a job with different characteristics than Whites and Others, especially jobs which are firm in their economic rewards. Differences occur in the organizational preferences because respondents racially dissimilar to the supervisor generally attach greater importance to preferred job characteristics. These differences may reflect four race-related factors present in the general society and therefore present in the past experience base of the respondents: racial discrimination effects, level of aspiration or expectancy effects, comparative deprivation effects, and cultural differences.

When felt racial discrimination on the job is examined by race, Blacks clearly feel more discrimination than Whites and those of Other races. This difference may reflect felt or perceived differential treatment by race, by Blacks in the Navy on aspects of work life not presently measured or similar treatment may be differentially interpreted by Blacks and Whites.

When correlations between felt racial discrimination and organizational practices and preferences are investigated by race, the prevalent pattern of statistically significant correlations are negative for organizational practices for all three racial groups with correlations for Blacks higher than for Whites and Others. Overall, the findings

for the three racial groups generally suggest that the worse the conditions in the organization as described by organizational practices, the more felt racial discrimination. The prevalent pattern of statistically significant correlations between felt racial discrimination and the organizational preferences is similarly negative for the races on preferred managerial and peer leadership measures, but positive for preferred job characteristic measures with correlations for Blacks also generally higher than for Whites and Others. The overall findings in the organizational preferences suggest the more felt discrimination the less, especially Blacks and Whites, prefer certain managerial and peer leadership practices and the more all three racial groups want a job with different characteristics.

In addition, when correlations between felt racial discrimination and organizational practices are investigated by racial work group composition, the prevalent pattern of statistically significant correlations is negative for the two racial composition groups, with correlations for respondents in groups whose race is different from that of their supervisor higher than respondents whose race is the same as that of their supervisor's. Overall, the results for respondents in both work groups indicate that the more unfavorable the conditions in the organization as described by organizational practices, the more felt racial discrimination.

Finally, the trend of statistically significant correlations between the discrimination dimension and organizational preferences is similarly negative for the two racial group compositions on preferred managerial and peer leadership measures, but generally positive for preferred job characteristic measures, with correlations for respondents in work groups whose race is the same as the supervisor generally higher.

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DIFFERENCES IN ORGANIZATIONAL PRACTICES  
AND PREFERENCES IN THE NAVY BY RACE

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## DIFFERENCES IN ORGANIZATIONAL PRACTICES AND PREFERENCES IN THE NAVY BY RACE

### INTRODUCTION

One of the most pressing issues facing America today is that of the relationship of the overall work culture to the behavior of Black, White, and other minority workers employed in various types of organizations, i.e., the military, business, industrial, and labor-unions.

Ford (1973) in a recent paper contends that concern with the work culture in organizations and its effect on the persons employed have resulted in a number of research studies in such areas as satisfaction and dissatisfaction of managerial and blue-collar employees (Schwab and Cummings, 1970), union-management relations (Miller, 1966), work group processes (Likert, 1961, 1967), and superior-subordinate relationships (Bowers and Seashore, 1966). However, he notes the variable of race was not examined in these studies or in many other instances. This may in part have been due to race being forbidden or not considered an important variable in studies of this nature.

The race-related organizational studies which have appeared in the last two decades seem to have focused primarily upon the plight of Black and other minority workers rather than upon their behavior or attitudes toward work.

However, more recently, the two latter areas have grown in importance as evidenced by the recent studies and reports, i.e., race-related research (Katz, 1970); leadership differences between Black and White supervisors and subordinates (King and Bass, 1970; Parker, 1972; and Richards and Jaffee, 1972); racial differences in homogeneous and heterogeneous work groups (Hill and Ruhe, 1972); racial attitudes in army life (Borus, Stanton, Fiman, and Dowd, 1972); leader's perceptions of racially different squads (Hill, Fox, and Ruhe, 1972); and differences between Blacks and Whites on racial generalizations and felt racial discrimination in the Navy (Stoloff, Lockman, Albritton, and McKinley, 1972).

Katz (1970), however, raises some concern about conducting research which focused solely upon race by contending that there remains the question of whether the sterility of race research should be blamed mainly upon its descriptive and applied emphases or upon its intrinsic nature. In support of the latter view, Katz maintains that it can be argued that the phenomena associated with Black-White relationships are reducible to the same components that are to be found in a broad range of other social phenomena involving status differences.

But even if there are no psychological processes unique to race relations, the field still merits considerable attention. This seems to be consistent with the view of van den Berghe (1967) who noted the fact that race in the United States is a special, identifiable, and extreme instance of invidious status differentiation, which makes it an especially strategic vantage point for the analysis of social behavior. It seems to afford a stronger and more lasting example of a number of factors related to social stratification than could ever be created by laboratory manipulations.

Results from a number of recent race-related organizational studies seem to support van den Berghe's contention about the importance of race in this society and the effects that it may have on the functioning of organizations. Differences between various racial and/or ethnic groups have been investigated recently in the military and in business and industrial organizations. The results from these studies suggest that differences, especially between Black and White groups may occur for several reasons: (a) race-related cultural differences, (b) the extent of discrimination based upon race or national origin, and (c) the racial composition of work groups. The work groups consist of the supervisor and those subordinates who report directly to the supervisor.

The results of a study conducted by Parker (1972) investigating differences between the behavior of Black and White first-line supervisors on four leadership characteristics (Support, Goal Emphasis, Work Facilitation, and Interaction Facilitation) (Bowers and Seashore, 1966) indicate that race of the perceiver and the racial composition of work groups appear to be related to the differences found. The findings of this study indicate that the race of subordinates and the racial composition of work groups on specific leadership measures is a critical variable in subordinate-supervisor

relations. More specifically, the findings suggest that regardless of the race of the subordinates, Black supervisors were ranked significantly higher or more favorable than White supervisors on three of the four managerial leadership measures (Managerial Support, Goal Emphasis, and Work Facilitation). Subordinates that are the same race as the supervisors rank them significantly higher or more favorably on the Support dimension, and only among White subordinates in a minority numerical position in work groups with White supervisors does the minority status seem important. White subordinates a minority in work groups rank their White supervisors more favorably on three of the managerial leadership measures (Managerial Goal Emphasis, Work Facilitation, and Interaction Facilitation). In summary, the results may be an indication that the behavior of supervisors toward their subordinates is a complex function of (a) the supervisor's own race and role in combination with (b) the race of subordinates, and (c) the majority or minority numerical positions of racial groups within the group supervised.

Additional research of this type is needed to isolate the racial variable and determine to what extent are there significant interactions between the race of subordinates and supervisors, and the effects of this on the work culture and employee satisfaction and performance.

Richards and Jaffee (1972), in another race-related leadership study investigating potential differences between Blacks and Whites, contended that it is possible Black supervisors must display a different pattern of behaviors to be deemed as effective as their White counterparts, simply because they are Black and under closer scrutiny by Whites, an hypothesis offered as a result of a laboratory study involving Black and White students in supervisory positions. One conclusion reached after Richards and Jaffee analyzed results from the Bale's Interaction Process Analysis (IPA) (1950) was that the behavior patterns of Black and White supervisors were different. Black supervisors were perceived to emit few behaviors related to being an effective supervisor. However, the observers who rated the Black and White supervisors in this study were White, and it is possible that racial attitudinal biases of the White raters might have affected their performance evaluation of Black supervisors. In analogous position, the racial attitudinal biases of White supervisors who supervise and evaluate Blacks in the military and in business and industrial organizations probably influence perceptions of their effectiveness. Richards and Jaffee acknowledge that further study is needed to determine if Black raters would employ a different criterion of behaviors related to supervisory effectiveness.

It was found in this study that White subordinates behaved differently when supervised by Blacks and that some of these behaviors impeded the effectiveness of the supervisor. Unfortunately, their study was not designed to determine the reaction of Black subordinates to Black supervisors.

In net, the study does seem to suggest that there is a high probability that the racial composition of work groups is a factor specifically affecting leader-subordinate relations. In concluding their study, the authors indicated that comparative organizational studies should be conducted in instances not only where performance differences among Black and White supervisors can be identified and compared, but also where potential differences may be measured in the perception of supervisor's behavior, using race of subordinate and supervisor as critical variables.

King and Bass (1970) did not conduct a comparative organizational study of this nature, but reviewed instead race-related leadership studies pertaining to the military, professional sports, and business and industrial organizations. From this review they suggested a number of hypotheses about Black-White, superior-subordinate relationships. For example, they suggest that, dependent upon the nature of the group they supervise, there are likely to be systematic differences in the leadership styles of Black and White supervisors. Functionally, the typical Black supervisor may exhibit greater adaptability to change and more sensitivity to the work environment, since "he might be more aware of and responsive to many of the situational moderators of effective work group performance" (p. 23). They also suggest that differences in the expected or perceived competence of new supervisors should be greater when leadership succession crosses racial lines, making it more difficult for the new supervisor to establish an influence base with his subordinates. In addition, the authors suggest that differential evaluation of performance and differential standards of performance for Blacks across various areas of management--marketing, research and development, etc.--will have a serious impact upon power equalization in an organization. Directiveness by supervisors will be more likely where races are mixed in the ranks of supervisors and subordinates because of the low interaction potential likely when communication crosses racial lines, and lower tendencies to interact in racially mixed groups. "Tendencies to interact will be lower and direction, rather than participation, will be more common among supervisors" (p. 26).

Hill and Ruhe (November, 1972) in another race-related study investigating differences between Blacks and Whites in homogeneous and heterogeneous work groups found differences in the racially mixed groups. They used Ziller's (1972) model for analysis of heterogeneity of group composition involving Blacks and Whites who participated as subordinates and supervisors in different racially mixed problem-solving groups. This was done to determine the consequences, for various attitudes and behaviors, of racial composition in subordinate dyads. More specifically, the study was conducted to ascertain whether racial composition affects the affective group structure, group processes, group perceptions, and consequently, group productivity. Briefly, Ziller's model suggests that race be studied in a paradigm that relates group composition (heterogeneity and homogeneity of race) and group productivity to affective group structure (cohesiveness), group processes (amount of satisfaction or conflict expressed), and group perception (individual perception differences). This conceptual linkage between group composition and group productivity is presented as Appendix A.

Results of the Hill and Ruhe (1972) study indicated that homogeneous Black and homogeneous White dyads of subordinates did not differ in cohesiveness, in the amount of conflict and satisfaction observed and reported, in self-esteem, or in group productivity. The only significant differences found between Black and White subordinates originated within the heterogeneous dyads. As compared to White subordinates, Black subordinates exhibited:

- a. less giving of suggestions
- b. less giving of information
- c. less giving of suggestions when with a white supervisor
- d. higher self-esteem
- e. lower duration of speech
- f. greater satisfaction with work in the tasks

The authors maintain that none of the above differences found within the heterogeneous dyads adversely affected group productivity. They noted that many of these differences were strong enough to persist in the aggregate comparisons between Black and White subordinates. Although group productivity was not adversely affected, this study indicates that heterogeneity versus homogeneity of racial composition can significantly affect

group members' perceptions of themselves, of other individuals, and of their work.

In the military, several recent race-related studies have also indicated that there are differences in perceptions between various racial and/or ethnic groups. Borus, Stanton, Fiman, and Dowd (1972) in a study to assess racial attitudes and perceptions of Army life, developed and administered the Racial Perceptions Inventory (RPI) to two widely different Black and White military populations (N=471) chosen from worldwide Army commands. The Black and White samples in their study were from two groups, a Field Group and Conference Group. The Field Group was composed of 414 combat arms troops to whom they administered the full-length 66-statement RPI at a post in the southern United States. This group consisted entirely of enlisted men in field units typical of garrison Army units in the United States. They noted that the Conference Group, in contrast to the Field Group, was composed primarily of men in command positions, ranging from high-ranking field-grade command and staff officers to command sergeant-majors. In both samples, Black soldiers accounted for 25 percent of the respondents.

The authors indicated that an analysis of the data from the two racial groups produced two significant findings. First, in spite of the widely different characteristics of the two military samples, Blacks and Whites in both consistently perceived the Army experience in substantially different ways. In testing for a difference in means between Black and White soldiers' responses, over 50 percent of the statements in the full-length RPI given to the field group showed markedly significant statistical differences between Black and White perceptions. Twenty percent of the statements in the abbreviated RPI given to the Conference Group showed a similarly significant difference in means between Black and White responses, and an additional 25 percent of the statements showed smaller, but still significant, differences according to race.

The second consistent finding is that in both of these disparate sample groups, Black soldiers from all levels of the military chain of command seemed to perceive a significantly greater amount of discrimination against them in multiple aspects of army life than did White soldiers.

Similar analyses were made of these two sample groups to determine the relative importance of other possible factors associated with differential perceptions. Factors traditionally hypothesized to influence racial perceptions, such as rank, education, and region of the country (Southerners vs. non-Southerners) were found not to be significantly related to racial perceptions in the Army. Ratings of agreement on each statement of the RPI were correlated with rank and education: none of the correlations were statistically significant. Also, mean ratings of agreement on each statement were compared for Southerners and non-Southerners and no significant differences were found.

Overall, this initial study by Borus, Stanton, Fiman, and Dowd (1972) seems to demonstrate that Black and White soldiers see many important aspects of Army life quite differently. In addition, it indicates that, in contrast to their White peers, Black soldiers perceive a considerable degree of discrimination directed against them in the Army. Yet the differences seem not to reflect many of the common accepted background characteristics. These findings may be due to real differences in the way the Army treats Black and White soldiers, i.e., there may in fact be significantly different input experiences according to race. On the other hand, the authors suggest, the findings may be related primarily to highly polarized pre-Army attitudes and expectations which selectively filter the daily Army experiences to produce contrasting perceptions of Army life. They maintain that the relative importance and degree of interaction of these two factors--input experiences and preconceived attitudes--in determining racial perceptions cannot be ascertained from these initial data.

What does seem important, however, is the existence of significant differences in the perception of Army life at multiple levels of the military hierarchy, differences which may have a vital effect upon the way military units function. When large groups of young men are required to act as a unit in performing their jobs but are seeing the contingencies of their environments in very different ways, one can expect these differential perceptions to prompt disharmonious paths of action and at times overt conflict.

Also, in a race-related study involving the Navy and Marine Corps, differences were found among respondents by race which may also indicate

that Black and White personnel are treated differently. In the Marine Corps study, Hill, Fox, and Ruhe (1972) investigated Black and White Marine squad leaders' perceptions of racially mixed squads as part of an overall seven-month longitudinal study of leadership effectiveness. The overall study, which contained 13 separate reporting periods, attempted to measure the perceptions of supervisors and subordinates concerning a large number of attitudinal and behavioral variables, as well as to determine whether these perceptions changed over the duration of the study. Certain questions from the larger study generated data which relate to the perceptions that Black and White supervisors have of their Black, White, and Puerto Rican subordinates. Results from the study indicate significant differences in the actual and expected frequencies with which White squad leaders reported that they reprimanded, praised, and felt their Black, Puerto Rican, and White subordinates were uncertain or undecided about their assignments. Also, differences were found in the performance rating scores reported by White squad leaders for the Black and White squad members. The authors maintain that differences were found when paired comparisons were made between Black and White leaders responses about their Black and White, Black and Puerto Rican, and Puerto Rican and White subordinates. The results from these paired comparisons indicate that:

- (a) White squad leaders gave proportionately more reprimands to Whites than to Blacks; no significance appeared when responses to Blacks and Puerto Ricans or Puerto Ricans and Whites were compared.
- (b) White squad leaders gave proportionately more praise to their White squad members than to Black or Puerto Rican members; there was no difference in their responses to Blacks versus Puerto Ricans.
- (c) White squad leaders reported their White squad members as proportionately more uncertain in their assignments than their Black members; no difference occurred in their responses when Blacks were compared to Puerto Ricans or Puerto Ricans contrasted with Whites.
- (d) White squad leaders rated the performance of their Black squad members proportionately higher than the performance of their White members.

These results seem to indicate that White squad leaders gave proportionately more reprimands to their White subordinates, but, also, gave them

proportionately more praise. In addition, they gave their Black subordinates proportionately better performance ratings than they gave their White members. Hill, Fox, and Ruhe, as a result of these findings, raise the following questions: "Could it be that White squad leaders were maintaining a certain added "distance" from their Black subordinates and were handling them with "special care"? Did they report that their White squad members were proportionately more uncertain due to better knowledge of their feelings, or because White members really were more uncertain due to the Corps' current stress on racial equity, or really were more uncertain due to wholly different causes?" (pp. 36-37)

Overall results from the White squad leaders seem to indicate that most differences were traced to reported differences between Black and White, rather than Puerto Rican, subordinates.

In another race-related study involving Black and White Navy personnel, Stoloff, Lockman, Allbritton, and McKinley (1972) found differences among the two races on opinions of two composite measures, Racial Generalizations and Felt Racial Discrimination. A questionnaire was administered to approximately 940 White and 170 Black enlisted men and approximately 296 White and 4 Black officers stationed at bases and aboard ships operating from both coasts, at the Great Lakes Naval Training Center, and at the Naval War College. Results indicate that on the composite measure of Racial Generalizations, Black enlisted men were the least likely to use racial generalizations about non-Whites. White enlisted men, on the other hand, subscribed more to racial generalizations and stereotyped ideas about non-Whites. Officers' scores fell between those of the Black and White enlisted men. On the Felt Discrimination composite measure, Blacks clearly have the highest scores, that is, perceive the most discrimination. The White enlisted men and officers have low scores with nearly identical distributions. In fact, most of the scores of the White enlisted men and officers are below the mean score of the Black enlisted men.

In summary, the results of these race-related studies in the military and in business and industrial organizations seem to suggest that race and the racial configuration of work groups make a difference in organizations and should be considered important variables in organizational studies.

The problems of racial discrimination, *per se*, should also be examined in organizations. Racial discrimination seems without a doubt to be a reality, but organizational behavior research has not come close to identifying it as a serious issue in managerial behavior.

In an effort to contribute to the understanding of the behavior of Black and other minority workers employed in systems, this organizational study will examine race as a variable to determine its potential effects on behavior in organizations. This study will investigate race as an important moderator variable. In simple form, the aim of this investigation may be stated as a series of questions:

1. When examined on the constellation of characteristics which previous research has shown to be associated with organizational effectiveness, how do Blacks, Whites, and those of Other races compare?
2. Do Blacks and those of other minorities feel more discrimination in their jobs than do Whites?
3. When relationships are investigated between felt racial discrimination and the constellation of organizational characteristics, how do the races compare?
4. Does racial composition of the work group affect members' perceptions of organizational characteristics?
5. When relationships between the discrimination dimension and the constellation of organizational characteristics are examined, how do respondents in the racially different work groups compare?

## METHODS

### SUBJECTS

To test these and other questions, a survey was administered to a sample of Navy units. The same survey was administered to a national random sample of civilians as part of a larger comparative study conducted jointly by the Navy and the Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, the University of Michigan. Only the Navy sample will be investigated in this study. A detailed description of the sampling techniques as well as a description of the fit of the Navy and civilian samples to their respective populations is presented in a methods report by Michaelsen (1973a). A summary of the procedures for the Navy sample follows:

Data from the Navy sample were collected from both ship and shore stations between November 1972 and February 1973. The surveys were personally administered by personnel from the Institute for Social Research, Center for Research on Utilization of Scientific Knowledge, the University of Michigan.

Ships were included in both the Atlantic and Pacific Fleets. Individuals in the sample were chosen in proportion to the number of personnel assigned to each ship type. For example, if 35 percent of the personnel assigned to ships were aboard destroyers, 35 percent of the individuals in the sample were selected so as to come from destroyers. Ships themselves were chosen largely on the basis of availability with the specific ship selection occasionally influenced by the logistics of moving Organizational Development Research Program staff from one ship to another. As may be imagined, weather and logistics were also occasional elements in determining whether the necessary connections between two selected ships could be made.

For at least two reasons, an effort was made to maximize in the sample as many ships as possible currently deployed away from their home ports. First, larger proportions of the billets are in fact filled on deployed ships than ships in port. Second, personnel aboard deployed ships are more likely to have had a period of exposure to the organizational variables being measured. For this reason, more than half of the ships sampled were deployed at the time of the administration of the survey.

Shore stations were included from eight shore station commands (Atlantic Fleet, Pacific Fleet, Training, Material, Personnel, Medicine and Surgery, Security, and Communications) and from the CNO staff. Individuals in the sample were chosen in proportion to the number of personnel assigned

to each command. Specific shore stations were randomly selected from those available in four geographical areas--East Coast, Memphis-Pensacola, San Diego, and Hawaii.

Personnel actually surveyed aboard a particular site were members of intact organizational subunits, consisting of work groups related to one another through supervisors who are, at the same time, a superior of the group they supervise and a subordinate in the group immediately above. In this fashion, one may conceive of the organization as a structure of such overlapping groups, a pyramid of interlaced pyramids. For purposes of identifying and selecting intact units for the study's analytic aims, the sampling basis was designated as a "module," by which is meant a "pyramid" of groups three echelons tall. Thus, members from four adjacent levels were included, with the module head defined as a person at the apex of that particular three-tier pyramid. Yet another criterion for the selection of a module was that the person at the apex (the module head) had been at his current assignment for at least three months.

A list of all personnel at a site who met the criteria for module head was obtained from manpower authorization documents and from organizational charts, and from these rosters an appropriate number of module heads were randomly selected. If a particular module did not provide a large enough sample of personnel required for the particular site, another module head was selected by the same method. Thus, the sample from a site consisted of one or more modules.

This sampling procedure resulted in data collection from 38 different Navy sites in a total sample size of 2,522 Navy personnel.

In the total sample there were 154 Blacks, 2,143 Whites, 188 of Other races, and 37 who refused to respond to the racial question. The only identifiable racial group in the Other race category is a small number of Chicanos. Since they represent a small number they combined for purposes of this study with those who identified themselves in the Other racial

category. These three racial groups, Black, White, and those of Other races form the bases of analysis of this study.

Michaelsen (1973a) contends that in spite of the rather unusual sampling procedure used in the present study, the overall demographic composition of the current Navy sample is strikingly similar to the Navy as a whole on many dimensions. The distribution of officers by age and rank and distribution of enlisted personnel by age and rank and the percentage of Blacks in the present sample and in the U.S. Navy are extremely close. The percentage of Blacks in the U.S. Navy\* is .058, and in the present sample it is .061.

#### THE MEASUREMENT INSTRUMENT

Two prominent features of the overall larger study, of which this is a part, served to guide the development of the data collection instrument. One of these was the planned collection of data from both Navy and civilian respondents, and the other was the importance of being able to compare and contrast the responses of these two groups. Consequently a basic instrument was developed with questions worded so that they would be appropriate for both groups and then a limited set of unique questions were added for use in each of the data collections. The entire instrument used in collecting data from the Navy sample is described in detail below.

The instrument used in the overall Navy research project is a machine-scored paper-and-pencil questionnaire containing 241 items, mostly of the multiple choice variety, with either 4 or 5-point Likert-type response scales. The questionnaire is divided into four sections on the basis of question content. Part A includes questions about the respondents' present job and about the conditions they experience as members of the ship or shore station to which they are currently assigned. Part B contains a series of questions, many of which have parallels in Part A that deal with the type of job and organizational conditions that respondents would prefer. Part

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\*Data on U. S. Navy taken from Navy and Marine Corps Military Personnel Statistics, 31 December 1972.

C explores the respondents' attitudes toward military service--attitudes about the role of military service in the nation, about issues linked to the development of an All-Volunteer Force, and about war in general and the Vietnam War in particular. The final section, Part D, requests background information from the respondents including both demographic data (age, education, race, etc.) and information about their decision to join the Navy. The entire questionnaire appears as Appendix A in Michaelsen's (1973a) methods report.

For purposes of this study, all of Part A will be investigated with the exception of the measures of Supervisory Needs and fifteen individual measures of job characteristics. Also, all of Part B will be examined with the exception of five individual measures of job preferences and five measures of organizational relevant values. In addition, one question identifying race of respondents in Part D will be investigated.

Most of the questions included in all four parts of the questionnaire are the product of two major research programs at the Institute for Social Research (ISR), the Organizational Development Research Program of the Center for Research on Utilization of Scientific Knowledge (CRUSK) and the Youth in Transition Project of the Survey Research Center (SRC). (A complete list of the questions and the sources from which they are derived appears as Appendix B.)

The first of these two research programs has resulted in the development of a questionnaire instrument for assessing and diagnosing functional properties associated with organizational effectiveness, the Survey of Organizations (S.O.O.) (Taylor and Bowers, 1970, 1972).

There are 29 multi-item indices and 20 individual items from the S.O.O. and the Youth in Transition project of the SRC investigated in this particular study. Included in the study are measures of a wide variety of organizationally relevant topics including Organizational Climate, Supervisory and Peer Leadership, Group Processes, Satisfaction, Own Influence in Work Groups, Work Group Effectiveness, Goal Integration, Job Equity, Task Motivation, Organizational Beliefs, and Job Challenge, Content, and Preferences.

### Organizational Climate

In all, five of the composite S.O.O. indices and one individual item are measures of Organizational Climate. The Organizational Climate measure refers to the relatively enduring qualities of an organization's internal environment distinguishing it from other organizations, (a) which result from the behavior and policies of members of the organization, especially top management; (b) which are perceived by members of the organization; (c) which serve as a basis for interpreting the situation; and (d) act as a source of pressures for directing activity (Prichard and Karasick, 1973). The dimensions of organizational climate tapped by the S.O.O. and included in the study are Human Resources Primacy, Communication Flow, Motivational Conditions, Lower Level Influence, Decision Making Practices, and Technological Readiness (Taylor and Bowers, 1972). A description of these Organizational Climate measures and the numbers of the questions from which they derived appears below.

Human Resources Primacy--the extent to which the climate as reflected in the organization's practices, is one which asserts that people are among the organization's most important assets. (A2, A3, A4)

Communication Flow--the extent to which information flows freely in all directions (upward, downward, and laterally) through the organization. (A5, A6, A7)

Motivational Conditions--the extent to which conditions (people, policies, and procedures) in the organization encourage or discourage effective work. (A8, A16, A18)

Lower Level Influence--the extent to which non-supervisory personnel and first line supervisors can influence the course of events in their work areas. (A20, A21)

Decision Making Practices--the manner in which decisions are made in the system: whether they are made effectively, made at the right level, and based upon all of the available information. (A22, A23, A24, A25)

Technological Readiness--the extent to which the organization is generally quick to use improved work methods. (A1)

### Organizational Leadership

Another group of indices, 16 in all, from the S.O.O. investigated in this study are measures of organizational leadership behavior. Four of

these indices have to do with the actual and four with the preferred behavior of supervisors. Similarly, four refer to the actual and four refer to the preferred behavior of members of subordinate peer groups. Each of these actual and ideal leadership domains has four facets: Support, Goal Emphasis, Work Facilitation, and Interaction Facilitation (Bowers and Seashore, 1966). A description of the Supervisory and Peer Leadership indices along with a listing of the numbers of the questions from which they are derived is as follows:

Supervisory Goal Emphasis--behavior which generates enthusiasm (not pressure) for achieving excellent performance levels. (Actual - A34, A36; Ideal - A35, A37)

Supervisory Work Facilitation--behavior on the part of supervisors which removes obstacles which hinder successful task completion or, positively, which provides the means necessary for successful performance. (Actual - A38, A40, A42; Ideal - A39, A41, A43)

Supervisory Interaction Facilitation--team building, i.e., behavior which encourages subordinates to develop mutually satisfying interpersonal relationships. (Actual - A44, A46; Ideal - A45, A47)

Peer Support--behavior of subordinates, directed toward one another, which enhances each member's feeling of personal worth. (Actual - A55, A57, A59; Ideal - A56, A58, A60)

Peer Goal Emphasis--behavior on the part of subordinates which stimulates enthusiasm for doing a good job. (Actual - A61, A63; Ideal - A62, A64)

Peer Work Facilitation--behavior which removes roadblocks to doing a good job. (Actual - A65, A67, A69; Ideal - A66, A68, A70)

Peer Interaction Facilitation--behavior of subordinates toward one another which encourages the development of close, cooperative, working relationships. (Actual - A71, A73, A75; Ideal - A72, A74, A76)

#### Additional S.O.O. Measures

Two additional indices and two individual questionnaire items from the S.O.O. are investigated in the present study: Group Process, Satisfaction, Own Influence in Work Group, and Work Group Effectiveness.

Group Process--the processes and functioning of the work group as a group, e.g., adaptability, coordinations, and the like. (A75, A76, A77, A78, A79, A80, A81)

Satisfaction--a measure of general satisfaction made up of items tapping satisfaction with pay, with the supervisor, with co-workers (peers), with the organization, with advancement opportunities, and with the job itself. (A9, A10, A11, A12, A13, A14, A15)

Own Influence in Work Group--a measure of the extent to which one has a say or influence on what goes on in the work group. (A19)

Work Group Effectiveness--a rating of work group effectiveness in relation to it fulfilling its mission or achieving its goals in comparison with other work groups. (A82)

### Goal Integration

Goal integration is also investigated in the study and is defined as the extent to which individuals can easily attain both personal goals and organizational objectives through the activities they engage in as organization members (Barrett, 1970). In the current study, Goal Integration is measured by an algebraic combination of two questionnaire items:

To what extent is the organization you work for effective in getting you to meet its needs and contribute to its effectiveness? (A107)

To what extent does the organization you work for do a good job of meeting your needs as an individual? (A108)

The response alternatives to these two items are five point extent scales ranging from one for "to a very little extent" to five for "to a very great extent." The formula for constructing the index from these two items is:

$$G.I. = \left[ \frac{L}{H} \right] \left[ \frac{L + H}{2} \right]$$

Where, G.I. is goal integration,

L is the score for the item with the lower score, and

H is the score for the item with the higher score.

In effect, the goal integration index is a function of both the consistency of the responses to the items and the mean of the two items. The possible values for this index are presented in Appendix C. The consistency factor serves to maximize scores for those individuals in situations where the individual and the organization take equal measures to meet each other's needs or objectives. Given the mean of any two items, the score is the highest when the response to both items is the same.

### S.0.0. Measures of Work Motivation

In addition to the Goal Integration measure of Work Motivation, there are two other measurements, Job Equity and Task Motivation.

Job Equity--a measure of the extent to which there is fairness, equitable treatment, and felt discrimination in the job based on race or national origin. (A109, A110, A111)

Task Motivation--the extent to which one enjoys performing the actual day-to-day activities that make up the job. (A17)

### Organizational Values and Supervisory Beliefs (Theory X)

Another facet of the research conducted by the Organizational Development Research program of CRUSK is concerned with the measurement and study of the impact of the values held by organization members on the quality of organizational functioning. A measure of organizationally relevant values that have been identified in earlier organizational research program work (Michaelsen, 1973b) is also included in this study. The measure is called Theory X (Supervisory belief).

Theory X--the extent to which organization members agree with the philosophies consistent with the Theory X assumptions proposed by McGregor (1961) such as "effective motivation is best achieved through rewards and penalties," "people prefer to be directed rather than making their own decisions," and "supervisors must keep a close check on subordinates to see if they are doing a good job. (B27, B28, B29, B30, B31, B32)

The second major research program at ISR from which a number of measures are drawn for use in the present study is the Youth in Transition project of the Survey Research Center. The primary focus of this program has been a longitudinal study of a nationwide panel of more than two thousand young men to investigate their patterns of early occupational interest and involvement, and their attitudes and behavior toward the continuation of formal educational pursuits, military service, and their attitudes on a variety of national issues (Bachman, Green, and Wirtenan, 1971; Bachman and van Duinen, 1971).

Many of the analyses using the measures derived from the Youth in Transition project in their application to the current data in the overall larger study of the Navy are reported elsewhere (Bachman, 1973).

### Job Challenge, Content, and Job Preferences

There are a total of eight multi-item indices and 21 individual items from the Youth in Transition project which are included in the overall survey instrument used in the Navy to collect data. However, only two multi-item indices and 15 individual items will be investigated in this study. One of these multi-item indices has to do with the actual and one with the preferred Job Challenge and Content. The 15 single questionnaire items individually measure what is preferred in a job.

A description of the Job Content and Challenge multi-item indices and the individual Job Preferences questionnaire items with a listing of the numbers from which they are derived is as follows:

Job Content and Challenge Multi-Item Indices. The two multi-item indices measure the degree of challenge actually experienced in one's job and the degree of challenge preferred in one's job. These measures originally developed by Gurin (1970) have to do with the characteristics of the respondent's present job (Actual) and preferred job (Ideal).

Job Challenge--a measure of the extent to which the job requires hard work, acceptance of responsibility, and acquisition of new skills and offers a chance to get ahead. [Actual - A85, A86 (R)<sup>1</sup>, A88, A89(R), A93, A95(R); Ideal - B3, B4(R), B6, B7(R), B11, B13(R)]

Individual Job Preference Items--the 15 job preference questionnaire items measure how important it is to have each of the following dimensions in a job: Steady Job Where There are No Layoffs (B2); Don't Work Hard (B4); Clean Job (B5); Lots of Free Time (B8); Good Pay (B9); Prestigious Job (B10); Friendly People to Work With (B12); Stay in One Place (B14); Serve Country Well (B15); Make World Better (B16); Good Fringe Benefits (B17); Control Personal Life (B18); No Endless Referrals (B19); No Red Tape (B20); and No Unexplainable Rules (B21).

### A Measure of Felt Racial Discrimination

A single item questionnaire measure of perceived racial discriminatory treatment, constructed for the overall Navy study, is also employed in this present study (Michaelsen 1973a)..

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<sup>1</sup>R indicates that the item score is reversed in the computation of index scores.

Quinn, Seashore, Kahn, et.al. (1971) in a National Working Conditions Study, investigated a similar type of dimension, seeking to determine if workers felt on-the-job discrimination against themselves on the basis of race or national origin. Their question was phrased in the following manner, seeking either a yes or no response: "Do you feel in any way discriminated against on your job because of race or national origin?" (p. 276). Quinn, Seashore, Kahn, et.al., cautioned that this discrimination question may have several problems because it measured on-the-job discrimination, rather than taking into account discrimination which may have been felt by potential workers outside the present work force as well as the unemployed. They also note this measure of discrimination may present problems because of its restrictive wording. The emphasis was upon discrimination on your job rather than upon the (potentially discriminatory) conditions which had led to the worker's being assigned to his job.

The question constructed for this study similarly seeks to measure the extent to which there is felt racial discrimination on the job by use of a five point, Likert-type scale. Even with the acknowledged limitations, it seems important to investigate the extent to which felt racial discrimination in the job appears to exist. A description of the discrimination item along with a listing of the questionnaire item is as follows:

Felt Racial Discrimination (FRD)--a measure of the extent to which discriminatory treatment is felt in-the-job based on race or national origin. (A111)

#### Measures of Work Group Racial Composition

Finally, a multi-item index indicating the racial composition of work groups is employed. Katz (1970), Parker (1972), Hill and Ruhe (1972), and Hill, Fox, and Ruhe (1972) indicated that the racial mix of work groups is an important variable in organizations. More specifically, Parker's (1972) study suggested that the behavior of supervisors toward their subordinates is a complex function of (a) the supervisor's own race and role in combination with (b) the majority or minority positions of racial groups within the group supervised. In addition, Hill and Ruhe's (1972) study also suggest that the racial homogeneity and heterogeneity of work groups has an effect on various attitudes and behavior of respondents in the groups.

In this present study, a multi-item index, Work Group Racial Composition, indicates the race of the respondent, race of his supervisor, and race of the work group majority and minorities. There were four possible racial identity responses, Black, White, Mexican-American, and Other, on three of the four questions pertaining to racial composition of the work group. On one other question indicating the race which was a minority in the work group, a none response was possible, since a group could be entirely of one race.

A description of this measure is presented with a listing of the questionnaire items:

Work Group Racial Composition--this measure indicates the race of respondent, race of immediate supervisor, race of majority of the members in work group, and a minority, if any, other race is most heavily represented in group. (D3, A115, A116, A117)

#### ANALYSIS PROCEDURES

A "one-way" analysis of variance was utilized to test differences on the organizational practices and preferences by race and the racial composition of work groups.

In addition, Pearson's Product Moment Correlation ( $r$ ) was utilized to determine the linear relationships between Felt Racial Discrimination, and the organizational practices and preferences by race and racial composition of work groups.

#### RESULTS AND DISCUSSION

The results of this study will be presented in two sections. In Section I, discussion will focus upon three aspects of the results by race: (a) differences in organizational practices and preferences, (b) differences in Felt Racial Discrimination, and (c) correlations between the discrimination dimension and organizational practices and preferences.

In Section II, discussion will center on the racial composition of work groups as a moderator variable. More specifically, discussion will focus on two aspects: (a) differences in organizational practices and preferences by racial group composition, and (b) correlations between the racial discrimination dimension and organizational practices and preferences by racial group composition.

#### SECTION I - DIFFERENCES IN ORGANIZATIONAL PRACTICES, PREFERENCES, AND FELT RACIAL DISCRIMINATION BY RACE

##### Differences in Organizational Practices by Race

One would expect that discriminatory treatment based upon race would appear as differences in experienced practices (organizational climate conditions, managerial behavior, peer behavior, and the like) reported by persons of different races.

The overall results indicate that there are in fact statistically significant differences<sup>2</sup> among the three racial groups on 11 of 22 organizational practice measures (see Table 1). Closer inspection reveals, however, that eight of these 11 statistically significant differences are attributable to the responses of those in the Other category, whose reports differ from those of both Blacks and Whites. The latter two groups, who together comprise the racial mainstream of American life, do not differ from each other on 19 of the 22 experienced practices measures. Little evidence exists, therefore, that Blacks and Whites receive differential treatment on these dimensions in the Navy. The three exceptions are the following:

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<sup>2</sup>Differences at or beyond the .05 level of confidence will be considered statistically significant. Exact P values for each measure will be found in the Tables.

TABLE 1  
MEAN DIFFERENCES IN ORGANIZATIONAL PRACTICES BY RACE

MEASURE	RACIAL GROUPS										F - STATISTIC
	BLACK		WHITE		OTHER		N	df			
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD					
Human Resources Primacy	2.74	.97	152	2.79	.88	2138	2.97	.85	188	2/2478	3.87*
Communication Flow	2.75	.93	153	2.94	.82	2137	2.80	.83	188	2/2478	5.41**
Motivational Condition	2.90	1.07	152	2.86	.95	2118	3.06	.90	185	2/2455	3.61*
Decision Making Practices	2.64	.87	153	2.55	.84	2138	2.79	.84	188	2/2479	7.34***
Technological Readiness	2.87	1.06	153	2.85	.96	2139	3.07	1.02	188	2/2480	4.52**
Lower Level Influence	2.16	1.07	146	2.07	.84	2110	2.47	1.03	185	2/2441	18.28***
Managerial Support	3.70	1.08	153	3.75	1.04	2135	3.49	1.08	188	2/2476	5.35**
Managerial Goal Emphasis	3.73	1.06	152	3.57	1.06	2127	3.42	1.04	186	2/2465	3.60*
Peer Support	3.57	1.08	153	3.70	.86	2128	3.50	.86	186	2/2467	5.55**
Work Group Effectiveness	3.82	.98	147	3.80	1.02	2120	3.62	1.03	184	2/2451	2.84*
Goal Integration	2.22	1.14	148	2.21	1.15	2113	2.62	1.06	181	2/2442	10.73***

\* $p < .05$   
\*\* $p < .01$   
\*\*\* $p < .001$

- On communication flow there is a difference in which Whites view the situation more positively than do Blacks and Others.
- Blacks report receiving more managerial goal emphasis than do Whites, who report in turn receiving a greater amount than do those of Other races.
- Whites generally report receiving more support from peers than do Blacks and Others.

#### Differences in Organizational Preferences by Race

In contrast to perceived practices, organizational preferences display statistically significant differences among racial categories for fully 22 of the 25 measures (See Table 2). For simplicity's sake, these measures may be divided into three categories: (a) leadership style preferences, (b) preferred job characteristics, and (c) adherence to autocratic versus democratic management beliefs. As before, the persuasiveness of the total count largely melts under closer scrutiny. Three of the leadership style preferences reflect no statistically significant differences, while four others display a difference principally of Other from both Blacks and Whites (who are not appreciably different from each other). On only one leadership style preference is there a statistically significant Black-White difference:

- Blacks prefer a somewhat higher level of managerial work facilitation than do Whites and Others.

In the area of preferred job characteristics, statistically significant differences occur among the races on all 15 measures. These differences may reflect four race-related factors present in the general society and therefore present in the past experience base of the respondents: racial discrimination effects, level of aspiration effects, comparative deprivation effects, and cultural differences.

Table 2, for example, shows that Whites express preferences for higher degrees of Job Challenge than do Blacks and Others. However, an earlier report (Bowers, 1973) showed that a similar difference among civilian respondents would be explained as the result of discriminatory treatment: non-White minorities may aspire to less challenging jobs perhaps because they have historically been given less challenging jobs or have been inadequately compensated for challenging jobs.

TABLE 2  
MEAN DIFFERENCES IN ORGANIZATIONAL PREFERENCES BY RACE

MEASURE	RACIAL GROUPS										F- STATISTIC
	BLACK			WHITE			OTHER			df	
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N		
Managerial Support	4.42	.74	151	4.36	.65	2130	4.15	.76	186	2/2467	9.78***
Managerial Goal Emphasis	4.38	.78	150	4.31	.72	2117	4.18	.76	187	2/2454	3.88*
Managerial Work Facilitation	4.27	.69	151	4.07	.75	2125	4.07	.73	186	2/2462	5.08**
Managerial Interaction Facilitation	4.31	.78	150	4.21	.77	2120	4.09	.84	185	2/2455	3.44*
Peer Support	4.27	.84	151	4.22	.67	2121	4.11	.73	185	2/2457	2.84*
Job Challenge	3.35	.42	153	3.50	.38	2144	3.30	.41	188	2/2485	32.18***
Steady, No Layoffs	3.56	.84	151	3.39	.82	2142	3.37	.85	188	2/2481	3.24*
Don't Work Too Hard	2.56	.91	153	2.00	.78	2142	2.31	.83	188	2/2483	47.32***
Clean Job	2.58	.97	153	2.12	.83	2143	2.23	.85	187	2/2483	22.82***
Lots of Free Time	2.83	.99	151	2.67	.85	2142	2.53	.88	188	2/2481	5.17**
Good Pay	3.87	.43	151	3.62	.56	2142	3.65	.54	186	2/2479	14.11**
Prestigious Job	2.67	1.08	148	2.42	.93	2133	2.79	.95	185	2/2466	17.47***
Friendly People	3.49	.80	148	3.42	.65	2134	3.63	.59	185	2/2467	9.84***

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 2 (contd.)

MEASURE	RACIAL GROUPS								df	F-STATISTIC		
	BLACK				WHITE							
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD				
Stay in One Place	3.25	.90	151	3.07	.93	2138	3.19	.86	184	2/2473		
Serve Country Well	3.13	.96	150	3.00	.89	2130	3.38	.82	184	2/2464		
Make World Better	3.41	.76	149	3.16	.79	2131	3.54	.72	185	2/2465		
Good Fringe Benefits	3.79	.43	150	3.47	.69	2137	3.68	.58	185	2/2472		
Control Personal Life	3.73	.55	150	3.67	.54	2130	3.54	.68	185	2/2465		
No Endless Referrals	3.71	.57	150	3.55	.63	2137	3.35	.80	184	2/2471		
No Red Rape	3.67	.59	150	3.56	.61	2138	3.40	.82	185	2/2473		
No Unexplainable Rules	3.69	.60	151	3.54	.65	2138	3.28	.91	185	2/2474		
Theory x (Authoritarian)	3.50	.75	152	3.27	.73	2142	3.58	.77	188	2/2482		

\* $p < .05$ \*\* $p < .01$ \*\*\* $p < .001$

On almost all of the other preferred job characteristics there are differences primarily because Blacks and Others are more concerned about having jobs which are firm in their economic rewards:

- Blacks attach greater importance to having a steady job than do Others and Whites.
- Blacks are more concerned about having a better paying job than are Whites and Others.
- Blacks and Others are more concerned about having a clean job than are Whites.
- Blacks and Others are more concerned about having a job with good fringe benefits than are Whites.
- Whites are less concerned than are Blacks and Others about having a job which requires hard work.
- Blacks and Others attach greater importance to having a prestigious job than do Whites.

In each of these instances, differences may be explained in terms of racial discrimination effects and comparative past deprivation effects: Blacks and Other non-White minority persons are more concerned than are more secure Whites that their jobs provide economic benefits which they have historically been denied.

On two other preferred job characteristics, differences are principally those of Other races versus Blacks and Whites. As such, they may well reflect the cultural differences inherent in a comparison of U.S. and non-U.S. nationals:

- Others are more concerned about having a job with friendly people than are Blacks and Whites.
- Others are also more concerned about having a job which serves their country than are Blacks and Whites.

Also on the job characteristic which refers to ability to control one's personal life, there is a difference among the races because:

- Blacks and Whites attach greater importance to having a job which permits control over one's personal life than do Others.

The remaining measures perhaps reflect some combination of the cultural differences, racial discrimination effects, and comparative deprivation explanation. For example, on the preferred free time job characteristic and the three organizational bureaucracy preferences, differences are Blacks versus Whites and Whites versus Others in that order:

- Blacks prefer having a job which allows more free time than Whites, followed by Whites and Others, in that order.
- Blacks are more concerned than are Whites that they do not have a job with endless referrals, a lot of red tape, and unexplainable rules, followed by Whites and Others, in that order.

In the area of autocratic-democratic supervisory beliefs, a difference occurs because Whites seem less willing to accept an authoritarian style of management than do Blacks and Others.

#### Felt Racial Discrimination by Race

Thus far, the picture is largely one of few surprising differences. Although those of Other races experience somewhat different practices, Blacks and Whites report much the same treatment on the characteristics measured. Preferences, although clearly different, are different only in ways quite congruent with the effects of lifetimes of stored discrimination. There is, therefore, little evidence to suggest that Blacks and Whites see organizational practices differently within the Navy. Still, Blacks clearly feel more discrimination in their jobs than do Whites (see Table 3).

This difference may reflect perceived differential treatment by race, by Blacks, in the Navy on aspects of work life not presently measured or similar treatment may be differentially interpreted by Blacks and Whites.

To answer this question, we will later examine the racial composition of the work group and its potential effects as a moderator variable. The investigation, however, will now turn to correlations between the discrimination measure and organizational practices and preferences to examine potential differences by race.

#### Correlations of Felt Racial Discrimination (FRD) with Organizational Practices by Race

The prevalent pattern of statistically significant correlations between Felt Racial Discrimination (FRD) and organizational practices is negative for all three racial groups, with correlations for Blacks higher than for

TABLE 3  
MEAN DIFFERENCES IN FELT RACIAL DISCRIMINATION BY RACE

MEASURE	RACIAL GROUPS										df	F- STATISTIC		
	BLACK			WHITE			OTHER							
	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N					
Felt Racial Discrimination	2.58	1.30	149	1.30	.79	2130	2.31	1.37	185	2/2464	243.65**			

\* $p < .05$   
\*\* $p < .01$   
\*\*\* $p < .001$

Whites and Others<sup>3</sup> (see Table 4). Correlations between the discrimination measure and almost all 22 organizational practices are significantly negative for Blacks and Whites while the number of significant correlations for Others seem to fall midway between those for Blacks and Whites. On all but the Lower Level Influence measure, correlations are negative and stronger for Blacks than for Whites.

The findings for the three racial groups generally suggest that the worst the conditions in the organization as described by organizational practices, the more felt racial discrimination.

When correlations are tested for differences by race, correlations between (FRD) and 18 of 22 organizational practices are significantly different among racial groups, with almost all correlations stronger for Blacks than Whites or than Whites and Others. The one exception is on the Lowel Level Influence measure, where correlations are stronger for Others than Blacks and Whites (See Table 4).

In descriptive terms, the more Blacks felt discrimination, the worse they generally see managerial and peer leadership, the organization's culture, and group processes within the organization. Discrimination was felt to be higher, in other words, when:

- Blacks experienced less managerial support, goal emphasis, work facilitation, and peer work facilitation than Whites.
- Blacks were less satisfied, had less of a challenging job, did not enjoy performing day-to-day activities that make up the job, and saw less fairness and equitable treatment in the job.
- Blacks saw less peer support, peer interaction facilitation (team building), and poorer work group processes.
- Blacks also saw less communication flowing in the organization, fewer decisions made at appropriate levels and the organization as slower to use improved work methods.
- Blacks experienced less peer goal emphasis and lower levels of "own" influence in the work group.

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<sup>3</sup>It might be argued that the lower coefficients for Whites occur because of variance restriction, that is, their preponderance of extremely low scores on Felt Discrimination. The argument is not given much credence in this present instance precisely because it occurs at the low end of the scale. (Infinitely less than nothing is still nothing.) Had it occurred at the high end of the scale, the argument would appear much more plausible.

TABLE 4

DIFFERENCES IN CORRELATIONS BETWEEN  
FELT RACIAL DISCRIMINATION AND ORGANIZATIONAL PRACTICES BY RACE

MEASURE	Racial Groups			Significance of Differences of r's by Race	
	Black N=147 r	White N=2125 r	Other N=185 r	Black White	Black Other
Human Resources Primacy	-.27***	-.18***	.00		-2.49**
Communication Flow	-.32***	-.19***	-.13		-1.80*
Motivational Condition	-.32***	-.20***	-.20**		
Decision Making Practices	-.34***	-.16***	-.14	2.24**	-1.91*
Technological Readiness	-.27***	-.11***	.15*	1.93*	-3.84***
Lower Level Influence	-.07	-.11***	.12		-1.71*
Managerial Support	-.34***	-.19***	-.27***	1.88*	
Managerial Goal Emphasis	-.30***	-.15***	-.24***	1.84*	
Managerial Work Facilitation	-.32***	-.11***	-.16*	2.57**	
Managerial Interaction Facilitation	-.28***	-.16***	-.12		

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 4 (contd.)

MEASURE	Racial Groups			Significance of Differences of r's by Race	
	Black N=147	White N=2125	Other N=185	Black White	Black Other
	r	r	r		
Peer Support	-.43***	-.18***	-.10	3.23***	-3.22***
Peer Goal Emphasis	-.28***	-.15***	-.01		-2.49**
Peer Work Facilitation	-.28***	-.12***	-.15*	1.94*	
Peer Interaction Facilitation	-.37***	-.13***	-.10	2.99***	-2.58**
Own Influence in Work Group	-.29***	-.20***	.01		-2.77**
Work Group Process	-.39***	-.20***	-.17**	2.43**	-2.15**
Satisfaction	-.38***	-.24***	-.24***	1.80*	
Work Group Effectiveness	-.22***	-.15***	-.13		
Job Challenge	-.33***	-.18***	-.18**	1.87*	
Task Motivation	-.37***	-.17***	-.26***	3.53***	
Goal Integration	-.25**	-.14***	-.14		
Job Equity	-.40***	-.19***	-.26***	2.69**	

\* $p < .05$   
\*\* $p < .01$   
\*\*\* $p < .001$

### Correlations of Felt Racial Discrimination (FRD) with Organizational Preferences by Race

The prevalent pattern of statistically significant correlations between (FRD) and organizational preferences is similarly negative for the races on preferred managerial and peer leadership measures, but positive for preferred job characteristic measures, with correlations for Blacks generally higher (see Table 5).

Overall, the results suggest the more felt discrimination, the less, especially Blacks and Whites preferred certain managerial and peer leadership practices, and the more all three racial groups want a job with different characteristics. The more Whites felt discrimination, the less they want managerial and peer Support, Goal Emphasis, Work Facilitation, and Interaction Facilitation. Also, the more Blacks felt discrimination, the less they want managerial and peer Support and Goal Emphasis and peer Interaction Facilitation.

When correlations are tested for significance of the differences, correlations between (FRD) and 10 of 25 organizational preferences are significantly different among the races. Almost all correlations are negative and stronger for Blacks on job characteristic measures, and stronger and positive on one managerial leadership measure for Blacks than for Others and Whites, in that order (see Table 5). In descriptive form Felt Racial Discrimination is higher for Blacks when:

- They attach greater importance to a job with friendly people.
- They attach lesser importance to a job with good fringe benefits and an ability to stay in one place.
- They are more concerned with having a prestigious job.
- They are more concerned about a job with lots of free time and less concerned about managerial support.

Also, the correlation between the discrimination dimension and a preferred peer leadership measure is stronger for Whites than for Others.

- The more Whites felt discrimination, compared to Others, the less concern with peer goal emphasis.

In addition, correlations between felt racial discrimination and several preferred job characteristic measures and a measure of supervisory beliefs are stronger for Others than for Whites.

TABLE 5

DIFFERENCES IN CORRELATIONS BETWEEN  
FELT RACIAL DISCRIMINATION AND ORGANIZATIONAL PREFERENCES BY RACE

MEASURE	Racial Groups			Significance of Differences of r's by Race	
	Black N=147	White N=2125	Other N=185	Black White	Black Other
Managerial Support	-.28***	-.18***	.13		
Managerial Goal Emphasis	-.27***	-.20***	-.13		
Managerial Work Facilitation	-.07	-.11***	-.09		
Managerial Interaction Facilitation	-.12	-.14***	-.10		
Peer Support	-.27***	-.18***	-.10		
Peer Goal Emphasis	-.21**	-.19***	-.04		
Peer Work Facilitation	-.13	-.14***	-.06		
Peer Interaction Facilitation	-.26***	-.17***	-.16*		
Job Challenge	-.06	-.12***	-.22**		
Steady, No Layoffs	-.05	-.05*	-.14*		
Don't Work Too Hard	.17*	.11***	.19**		

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 5 (contd.)

MEASURE	Racial Groups			Significance of Differences of r's by Race	
	Black N=147 r	White N=2125 r	Other N=185 r	Black White	Black Other
Clean Job	.13	.07***	.11		
Lots of Free Time	.18*	.11***	-.03		1.90*
Prestigious Job	.23**	.04	.18**		-2.26**
Friendly People	.18*	.01	-.03		1.90*
Stay in One Place	-.01	.05*	-.00		-2.00*
Serve Country Well	-.01	-.07***	.08		-8.07***
Fringe Benefits	-.10	-.01	.08		-1.62*
Control Personal Life	-.03	.04	-.09		1.69*
Theory X (Authoritarian)	.05	-.02	.13		-1.95*

\*p&lt;.05

\*\*p&lt;.01

\*\*\*p&lt;.001

- The more Others felt discrimination compared to Whites, the more they are concerned with having an authoritarian supervisor, a job which serves country well, and the less concerned they are with having a job with control over personal life.

In the next section, differences in organizational practices, preferences, and felt racial discrimination will be investigated by racial group composition to see its potential effects as a moderator variable.

## SECTION II - DIFFERENCES IN ORGANIZATIONAL PRACTICES, PREFERENCES, AND FELT RACIAL DISCRIMINATION BY RACIAL GROUP COMPOSITION

This investigation has examined potential differences and relationships between (FRD) and organizational practices and preferences by race. Differences among racial composition of work groups will be investigated next to see if the composition of work groups can be a critical explanatory variable. Also, differences in relationships between (FRD) and organizational practices and preferences will be investigated, controlling for racial work group composition.

### Differences in Organizational Practices by Racial Group Composition

Table 6 presents results which indicate that there are significant differences among two different racially mixed work groups on 14 of 22 organizational practices. The data indicate that respondents whose supervisor is of the same race see all 14 conditions in the organization, as described by the organizational practices measures, as more favorable or better than do respondents whose supervisor differs from them in race.

No differences occur among the two groups on three of six Organizational Climate Measures (Lower Level Influence, Decision-Making Practices, and Technological Readiness), two managerial and peer leadership measures (Managerial Goal Emphasis, Managerial Work Facilitation, Peer Work Facilitation, and Peer Interaction Facilitation), or on a Work Motivation measure, Goal Integration.

Differences do occur, however, on three of six Organizational Climate measures (Human Resources Primacy, Communication Flow, and Motivational Conditions), two managerial and peer leadership measures (Managerial Support, Managerial Interaction Facilitation, Peer Support, and Peer Goal Emphasis), and on measures of Own Influence in Work Group, Work Group Processes, Satisfaction, Work Group Effectiveness, Job Challenge, Task Motivation, and Job Equity.

TABLE 6  
MEAN DIFFERENCES IN ORGANIZATIONAL PRACTICES BY RACIAL GROUP COMPOSITION

MEASURE	RACIAL GROUP COMPOSITION				df	F-Statistic
	Race of Respondents and Race of Supervisor, the Same in Work Group <sup>1</sup>	SD	Race of Respondents and Race of Supervisor Different in Work Group <sup>2</sup>	SD		
Human Resources Primacy	2.83	.88	2.70	.90	1/2454	7.16**
Communication Flow	2.94	.83	2.80	.90	1/2454	10.32***
Motivational Conditions	2.90	.95	2.78	.97	1/2430	4.71*
Managerial Support	3.76	1.04	3.59	1.07	1/2454	8.61**
Managerial Interaction Facilitation	3.21	1.17	3.06	1.23	1/2447	5.32*
Peer Support	3.70	.87	3.57	.92	1/2445	6.75**
Peer Goal Emphasis	3.12	.99	3.00	1.05	1/2441	4.36*
Own Influence in Work Group	2.61	1.32	2.42	1.31	1/2456	6.91**
Work Group Processes	3.54	.77	3.38	.81	1/2447	12.64***
Satisfaction	3.35	.83	3.24	.90	1/2455	5.93**
Work Group Effectiveness	3.82	1.01	3.65	1.01	1/2429	9.11**

<sup>1</sup>N≥2047  
<sup>2</sup>N≥377

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 6 (contd.)

MEASURE	RACIAL GROUP COMPOSITION			F-Statistic
	Race of Respondents and Race of Supervisor the Same in Work Group <sup>1</sup>	Race of Respondents and Race of Supervisor Different in Work Group <sup>2</sup>	df	
Job Challenge	.63	.64	1/2452	8.78**
Task Motivation	1.17	1.16	1/2460	4.45*
Job Equity	2.98	.98	1/2432	7.00**

<sup>1</sup>N≥2047  
<sup>2</sup>N≥377

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

Differences occur in these practices because respondents in racially similar work groups generally see:

- A greater importance attached to human resources in the organization.
- Information flowing more effectively upward, downward, and laterally in the organization.
- Conditions and relationships in the organization's environment as generally encouraging to effective work.
- A greater degree of support and interaction facilitation (team building) from supervisor, and of support and goal emphasis from peers.
- Own influence in work group, work group processes, and work group effectiveness as greater.
- Job challenge, enjoyment in performing the actual day-to-day activities that make up the job and overall satisfaction is better.

In conclusion, when differences in organizational practices are investigated by race, little evidence of difference is found, but when the racial configuration of the work group is examined, differences occur. Respondents whose supervisor is of the same race view the conditions in the organization as better than do those whose supervisor is of a different race.

#### Differences in Organizational Preferences by Racial Group Composition

Thirteen of 25 organizational preferences reflect statistically significant differences among the racial composition categories (see Table 7). There are differences among the work groups on two of four preferred managerial leadership measures (preferred Managerial Support and preferred Managerial Goal Emphasis), and one of four preferred peer leadership measures (preferred Peer Goal Emphasis), and the preferred Job Challenge measure, as well as nine of 15 preferred job characteristics. Generally, differences occur on the preferred managerial and preferred peer leadership measures and the preferred job challenge measure, because respondents racially similar to the supervisor want more of a challenging job and more managerial support, goal emphasis, and peer goal emphasis while respondents racially dissimilar to the supervisor attach greater importance to job characteristics.

Differences occur because:

- Respondents racially similar to the supervisor generally want more support and goal emphasis from that supervisor than do respondents racially dissimilar to the supervisor.

TABLE 7  
MEAN DIFFERENCES IN ORGANIZATIONAL PREFERENCES BY RACIAL GROUP COMPOSITION

MEASURE	RACIAL GROUP COMPOSITION			df	F-
	Race of Respondents and Race of Supervisor <sup>1</sup> the Same in Work Group	SD	Race of Respondents and Race of Supervisor Different in Work Group		
Managerial Support	4.37	.65	4.23	.72	1/2444
Managerial Goal Emphasis	4.33	.72	4.22	.76	1/2431
Peer Goal Emphasis	4.18	.79	4.05	.89	1/2425
Job Challenge	3.50	.38	3.38	.39	1/2459
Steady, No Layoffs	3.38	.83	3.47	.82	1/2455
Don't Work Too Hard	2.01	.79	2.31	.86	1/2457
Clean Job	2.13	.83	2.29	.92	1/2457
Lots of Free Time	2.65	.85	2.75	.93	1/2455
Good Pay	3.62	.56	3.75	.50	1/2453
Friendly People	3.42	.65	3.53	.69	1/2441

<sup>1</sup>N≥2048  
<sup>2</sup>N≥377

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 7 (contd.)

MEASURE	RACIAL GROUP COMPOSITION			df	F- Statistic
	Race of Respondents and Race of Supervisor, the Same in Work Group <sup>1</sup>	$\bar{X}$	SD		
Stay in One Place	3.08	.92	3.19	.91	1/2448 4.60*
Make World Better	3.18	.79	3.34	.77	1/2441 12.58***
Fringe Benefits	3.49	.68	3.62	.60	1/2446 12.38***

<sup>1</sup>N≥2048  
<sup>2</sup>N≥377

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

- Respondents racially similar to the supervisor are also more concerned than are racially dissimilar respondents about peer goal emphasis and about having a challenging job.
- Respondents racially dissimilar to the supervisor attach greater importance than do racially similar respondents to having a steady, clean, good paying job with good fringe benefits, lots of free time, friendly people to work with, in which work is not excessively hard, and which permits one to stay in one place and contribute to a better world.

#### Correlations of Felt Racial Discrimination (FRD) with Organizational Practices by Racial Group Composition

The prevalent pattern of statistically significant correlations between (FRD) and organizational practices is negative for the two racial composition groups, with correlations for respondents in groups whose race is different from that of their supervisor higher than respondents whose race is the same as that of their supervisor's (see Table 8). Correlations between the felt discrimination measure and all but two of the 22 practices are negative, significant, and stronger for respondents whose race differs from that of their supervisor. The two exceptions are in Organizational Climate measures (Technological Readiness and Lower Level Influence), where correlations between (FRD) and these measures, are negative and stronger for respondents in work groups whose race and the supervisor's race are the same.

The overall results for respondents in both work groups indicate that the more unfavorable the conditions in the organization as described by organizational practices, the more felt racial discrimination.

When correlations are tested for the significance of differences by racial group composition, correlations between (FRD) and 6 of 22 organizational practices are significantly different among respondents in the two racially different groups, with almost all correlations negative and stronger for respondents whose race is different from their supervisor's.

Discrimination was therefore felt to be higher when:

- Respondents in work groups whose race and the supervisor's race is different saw less communication flowing in the organization, fewer decisions made at appropriate levels, experienced less managerial work facilitation, peer interaction facilitation (team-building), and had a less challenging job.

TABLE 8  
DIFFERENCES IN CORRELATIONS BETWEEN FELT RACIAL DISCRIMINATION  
AND ORGANIZATIONAL PRACTICES BY RACIAL GROUP COMPOSITION

MEASURE	Race of Respondents and Race of Supervisor the Same in Work Group <sup>1</sup>	Race of Respondents and Race of Supervisor Different in Work Group <sup>2</sup>	Significance of Differences of $r$ 's by Racial Group Composition
	$r$	$r$	
Human Resources Primacy	-.12***	-.20***	
Communication Flow	-.17***	-.28***	2.07*
Motivational Conditions	-.16***	-.24***	
Decision Making Practices	-.11***	-.22***	2.02*
Technological Readiness	-.06**	-.09	
Lower Level Influence	-.06**	.04	
Managerial Support	-.19***	-.25***	
Managerial Goal Emphasis	-.14***	-.21***	
Managerial Work Facilitation	-.09***	-.20***	2.01*
Managerial Interaction Facilitation	-.13***	-.18***	
Peer Support	-.19***	-.24***	

<sup>1</sup> $N \geq 2027$   
<sup>2</sup> $N \geq 372$

\* $p < .05$   
\*\* $p < .01$   
\*\*\* $p < .001$

TABLE 8 (contd.)

MEASURE	Race of Respondents and Race of Supervisor the Same in Work Group <sup>1</sup>		Race of Respondents and Race of Supervisor Different in Work Group <sup>2</sup>		Significance of Differences of r's by Racial Group Composition
	r	r	r	r	
Peer Goal Emphasis	-.10***		-.17***		
Peer Work Facilitation	-.11***		-.19***		
Peer Interaction Facilitation	-.10***		-.22***		2.20**
Own Influence in Work Group	-.15***		-.16***		
Work Group Processes	-.18***		-.26***		
Satisfaction	-.20***		-.27***		
Work Group Effectiveness	-.13***		-.16***		
Job Challenge	-.14***		-.22***		
Task Motivation	-.15***		-.23***		
Goal Integration	-.10***		-.18***		
Job Equity	-.15***		-.33***		3.42***

<sup>1</sup>N≥2027  
<sup>2</sup>N≥372

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

Correlations on the other measure, Lower Level Influence, were negative and stronger for respondents in work groups whose race and the supervisor's race are the same, suggesting that the more they felt discrimination, the less influence they saw lowest-level supervisors and non-supervisory personnel as having on what goes on in the organization.

#### Correlations of Felt Racial Discrimination (FRD) with Organizational Preferences by Racial Group Composition

The trend of statistically significant correlations between (FRD) and organizational preferences is similarly negative for the two racial group compositions on preferred managerial and peer leadership measures, but generally positive for preferred job characteristic measures, with correlations for respondents in work groups whose race is the same as the supervisor generally higher (see Table 9).

The findings suggest that the more felt discrimination the less respondents racially similar to the supervisor generally want managerial and peer support goal emphasis, work facilitation, and interaction facilitation. Also, the more felt racial discrimination the less respondents racially dissimilar to the supervisor generally want managerial and peer support and goal emphasis, and peer work facilitation and interaction facilitation. In addition, the more felt racial discrimination the more both racial composition groups want a job with different characteristics.

When correlations are tested for significance of differences, correlations between (FRD) and 3 of 25 organizational preferences are significantly different among respondents in the two work groups, with correlations on two of the measures (Managerial Interaction Facilitation and Theory X), stronger for respondents in groups with supervisors of the same race and stronger for respondents in the other (races different) work group on preferring a clean job (see Table 9).

The results indicate the more discrimination felt by respondents in racially similar work groups the less they want managerial interaction facilitation (team building) and the more they feel supervisors should be authoritarian. Also, the findings suggest that the more discrimination felt by respondents in work groups with supervisor of a different race the more they prefer having a clean job.

TABLE 9  
DIFFERENCES IN CORRELATIONS BETWEEN FELT RACIAL DISCRIMINATION  
AND ORGANIZATIONAL PREFERENCES BY RACIAL GROUP COMPOSITION

MEASURE	Race of Respondents and Race of Supervisor the Same in Work Group <sup>1</sup>		Race of Respondents and Race of Supervisor Dif- ferent in Work Group <sup>2</sup> Significance of Differences of r's by Racial Group Composition
	r	r	
Managerial Support	-.17***	-.17***	
Managerial Goal Emphasis	-.19***	-.16**	
Managerial Work Facilitation	-.08***	-.09	
Managerial Interaction Facilitation	-.14***	-.05	1.62*
Peer Support	-.17***	-.16***	
Peer Goal Emphasis	-.16***	-.12**	
Peer Work Facilitation	-.11***	-.12*	
Peer Interaction Facilitation	-.14***	-.21***	
Job Challenge	-.17***	-.12*	

<sup>1</sup>N≥2037  
<sup>2</sup>N≥372

\*p<.05  
\*\*p<.01  
\*\*\*p<.001

TABLE 9 (contd.)

MEASURE	Race of Respondents and Race of Supervisor the Same in Work Group <sup>1</sup>	Race of Supervisor Different in Work Group <sup>2</sup>	Significance of Differences of $r$ 's by Racial Group Composition	
			$r$	$r$
Steady, No Layoffs	-.06**	.01		
Don't Work Too Hard	.15***	.21***		
Clean Job	.08***	.20***		
Lots of Free Time	.08***	.09		
Good Pay	.05*	.03		
Prestigious Job	.09***	.15**		
Friendly People	.05*	.03		
Stay in One Place	.05*	.03		
Make World Better	.05*	.07		
Theory X (Authoritarian)	.07***	-.04	1.97*	

<sup>1</sup> $N \geq 2037$   
<sup>2</sup> $N \geq 372$

\* $p < .05$   
 \*\* $p < .01$   
 \*\*\* $p < .001$

In conclusion, the findings in this study seem to generally suggest that the effects of historical accumulations of discriminatory treatment may lead Blacks to perceive and interpret more than Whites, that negative treatment is personally discriminatory. However, the racial composition of work groups goes some distance toward moderating these effects.

#### SUMMARY

This study had as its major goal the investigation of differences in organizational practices, preferences, and felt racial discrimination by race and racial composition of work groups in the Navy. The findings indicate there is little evidence of differences in organizational practices by race, especially among Blacks and Whites who together comprise the racial mainstream of American life. However, differences do occur when the racial composition of work groups are investigated. Respondents in work groups with supervisor of the same race view the conditions in the organization better than do those whose supervisor is of a different race. These findings may be an indication that the racial configuration of the work group differentiates in the practices where race alone does not. There are differences in the organizational preferences by both race and the racial composition of work groups, with Blacks generally being more concerned about having a job with different characteristics than Whites and Others, especially jobs which are firm in their economic rewards. Differences occur in the organizational preferences because respondents racially dissimilar to the supervisor generally attach greater importance to preferred job characteristics. These differences may reflect four race-related factors present in the general society and therefore present in the past experience base of the respondents: racial discrimination effects, level of aspiration or expectancy effects, comparative deprivation effects, and cultural differences.

When felt racial discrimination on the job is examined by race, Blacks clearly feel more discrimination than Whites and those of Other races. This difference may reflect felt or perceived differential treatment by race, by Blacks in the Navy on aspects of work life not presently measured or similar treatment may be differentially interpreted by Blacks and Whites.

When the correlations between felt racial discrimination and organizational practices are investigated by race, the prevalent pattern of statistically significant correlations are negative for all three racial groups, with correlations for Blacks higher than for Whites and Others. Overall, the findings for the three racial groups generally suggest that the worse the conditions in the organization as described by organizational practices, the more felt racial discrimination. The prevalent pattern of statistically significant correlations between felt racial discrimination and the organizational preferences is similarly negative for the races on preferred managerial and peer leadership measures, but positive for preferred job characteristic measures with correlations for Blacks also generally higher than for Whites and Others. The overall findings in the organizational preferences suggest the more felt discrimination the less, especially Blacks and Whites, prefer certain managerial and peer leadership practices and the more all three racial groups want a job with different characteristics.

In addition, when correlations between felt racial discrimination and organizational practices are investigated by racial work group composition, the prevalent pattern of statistically significant correlations is negative for the two racial composition groups, with correlations for respondents in groups whose race is different from that of their supervisor higher than respondents whose race is the same as that of their supervisor's. Overall, the results for respondents in both work groups indicate that the more unfavorable the conditions in the organization as described by organizational practices, the more felt racial discrimination.

Finally, the trend of statistically significant correlations between the discrimination dimension and organizational preferences is similarly negative for the two racial group compositions on preferred managerial and peer leadership measures, but generally positive for preferred job characteristic measures, with correlations for respondents in work groups whose race is the same as the supervisor generally higher.

## References

Bachman, J. G. Values, preferences and perceptions concerning military service. Ann Arbor, Michigan: Survey Research Center, Institute for Social Research, 1973.

Bachman, J. G., Green, S. and Wirtanen, I. D. Youth in transition, Volume III: Dropping out--problem or symptom? Ann Arbor, Michigan: Survey Research Center, Institute for Social Research, 1971.

Bachman, J. G. & van Duinen, E. Youth look at national problems: A special report. Ann Arbor, Michigan: Survey Research Center, Institute for Social Research, 1971.

Barrett, J. H. Individual goals and organizational objectives: a study of integration mechanisms. Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1970.

Borus, J. F., Maj. M.C., Stanton, M. D., Capt. M.S.C., Fiman, B. G., Capt. M.S.C. & Dowd, A. F. Racial perceptions in the Army: an approach. American Journal of Psychiatry, Volume 128, (11), May, 1972.

Bowers, D. G. Values and their impact for Navy and civilian respondents. Ann Arbor: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1973.

Bowers, D. G. & Seashore, S. Predicting Organization Effectiveness with a four-factor theory of leadership. Administrative Science Quarterly, 1966, 11, 238-263.

Ford, D. L., Jr. "Managerial process and organizational behavior: The Black business firm." West Lafayette, Indiana: Institute for Research in the Behavioral, Economic, and Management Sciences, Krannert Graduate School of Industrial Administration, Purdue University, 1973, unpublished.

Gurin, G. Job attitude measures from youth in transition. Institute for Social Research, 1970.

Hill, W. A., Fox, W. M. & Ruhe, J. A. Black and White Marine squad leaders perceptions of racially mixed squads. Technical Report No. 70-3, Contract No. N00014-68-A-0173-0010, U.S. Office of Naval Research, August, 1972.

Hill, W. A. & Ruhe, J. Consequences of racial heterogeneity and homogeneity in problem-solving groups. Technical Report No. 72-1, Contract No. N00014-68-A-0173-0019, U.S. Office of Naval Research, November, 1972.

Katz, I. Experimental studies of Negro-White Relationships. In Leonard Berkowitz (Ed.), Advances in experimental social psychology, New York: Academic Press, Volume 5, 1970.

King, D.C. & Bass, B. B. Leadership power and influence. In H. L. Fromkin and J. J. Sherwood (Eds.) Integrating the organization. New York: Free Press, 1974 (in press).

Likert, R. New Patterns in Organizations. New York: McGraw-Hill, 1961.

Likert, R. The human organization. New York: McGraw-Hill, 1967.

McGregor, D. The human side of enterprise. New York: McGraw-Hill, 1960.

Michaelsen, L. A methodology for the studies of the impact of organizational values, preferences, and practices on the all-volunteer Navy. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, The Institute for Social Research, June, 1973a.

Michaelsen, L. K. Leader orientation, leader behavior, group effectiveness, and situational favorability: An empirical extension of the contingency model. Organizational Behavior and Human Performance, 9, (2) April, 1973b.

Miller, E. Job satisfaction of national union officials. Personnel Psychology, 1966, 19, 261-274.

Parker, W. S. Differences between Black and White first-line supervisors on four dimensions of leadership behavior in three industrial plants. Ann Arbor: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1972 (submitted for publication).

Prichard, R. D. and Karasick, B. W. The effects of organizational climate on managerial job performance and job satisfaction. Organizational Behavior and Human Performance, 1973, 9, 126-146.

Quinn, R. P., Seashore, S., Kahn, R. L., et. al. Survey of Working Conditions. Ann Arbor, Michigan: Survey Research Center, Institute for Social Research, 1971.

Richards, A. S. & Jaffee, C. L. Blacks supervising Whites: A study of interracial difficulties in working together in a simulated organization. Journal of Applied Psychology, 56, (3), 234-240, 1972.

Schwab, D., Cummings, L. Employee performance and Satisfaction with work roles: A review and interpretation of theory. Industrial Relations, 1970, 9, 408-431.

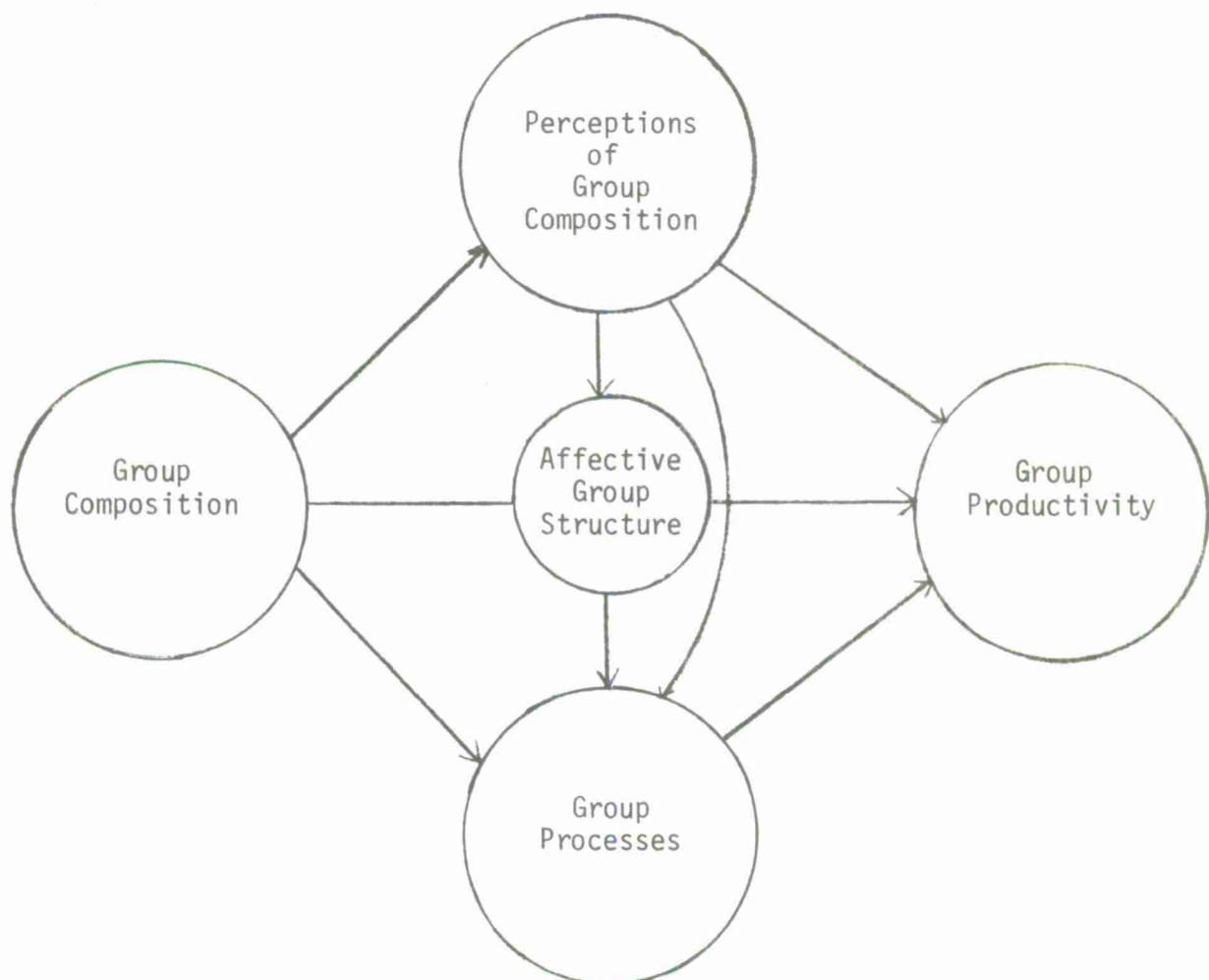
Stoloff, P. H., Lockman, R. F., Albritton, A. S., U.S.N. and McKinley, H. H., Jr., L. Cdr., U.S.N. Development of the Navy human relations questionnaire. Arlington, Virginia: Center for Naval Analyses, Institute of Naval Studies, Research Contribution 223, October, 1972.

Taylor, J. C. & Bowers, D. G. Survey of Organizations. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1972.

Van den Berghe, P. L. Race and Racism. New York: Wiley, 1967.

Ziller, R. C. Homogeneity and heterogeneity of group membership. In McClintock (Ed.), Experimental Social Psychology, New York: Holt, Rinehart, and Winston, Inc., 1972.

## Appendix A

Conceptual Links Between Group Composition  
and Group Productivity

## Appendix B

## Outline of Instrument Content

Questions	Description	Source
---PART A---		
1 - 82	Items which form 28 critical indices of <u>Survey of Organizations</u>	Taylor & Bowers, <u>The Survey of Organizations</u> . Ann Arbor, Michigan: Institute for Social Research, 1972, (in press).
83 - 103	Measures of job content	Youth in Transition (See Johnston and Bachman, <u>Young Men Look at Military Service</u> . Ann Arbor, Michigan: Institute for Social Research, 1970) and other ISR studies of meaning of work, work satisfaction, and motivation.
104	Measure of pressure for production	Michaelsen, L.K., Leader Orientation, Leader Behavior, Group Effectiveness, and Situational Favorability: An Empirical Extension of the Contingency Model. <u>Organizational Behavior and Human Performance</u> , 1973, 9, 226-245.
105 - 106	Measures from technology studies	Mohr, L., "Organizational Technology and Organizational Structure," <u>Administrative Science Quarterly</u> , 1971, 16, 444-459.
107 - 108	Goal Integration index	Barrett, J. <u>Individual goals and organizational objectives</u> . Ann Arbor, Mich.: Institute for Social Research, 1970.
109 - 110	Measures of fairness and equitable treatment	Butterfield, D., An integrative approach to the study of leadership effectiveness in organizations. Unpublished doctoral dissertation, University of Michigan, 1968.
111	Measure of perceived discriminatory treatment	Constructed for present study.
112 - 114	Measures of Technological Sophistication of Job	Taylor, J., <u>Technology and planned organizational change</u> . Ann Arbor, Michigan: Institute for Social Research, 1971.
115 - 117	Measures of work group racial composition.	Adapted from current work within ISR.

Appendix B  
(contd.)

Questions	Description	Source
---PART B---		
1 - 21	Measures of job preferences (match job content items 83-103 in Part A)	Youth in Transition and other ISR studies of meaning of work, work satis- faction, and motivation.
22 - 32	Items contained in two index measures of super- visory values, from <u>Survey</u> <u>of Management Beliefs</u> .	Michaelsen, L., <u>op. cit.</u>
---PART C---		
1 - 5	Perceived opportunities for those in armed services	Constructed for present study based on items from the Youth in Transition project.
6 - 9	Perceived fairness of treatment in armed services	Youth in Transition Project (see John- ston and Bachman, <u>op. cit.</u> ) Items 7 and 8 constructed for present study.
10	Attitudes toward having a son enlist in the military service	Constructed for present study.
11 - 16	Attitudes about several issues related to an all- volunteer force (12 & 13, 14 & 15 are matched pairs, balanced to counteract agreement bias)	Constructed for present study.
17 - 24	Perceived effectiveness of armed services	Constructed for present study.
25 - 26	Armed services influence	Youth in Transition project.
27	Overall attitude toward military services since WW II	Constructed for present study.
28 - 37	Civilian and military influence, actual and ideal	Constructed for present study.

Appendix B  
(contd.)

Questions	Description	Source
38 - 39	Pacifist attitudes	Developed by Putney, "Some Factors Associated with Student Acceptance or Rejection of War," <u>American Sociological Review</u> , 1962, 27, 655-667, and used in the Youth in Transition Project (see Johnston and Bachman, <u>op. cit.</u> ).
40 - 44	Attitudes about U.S. military policy	Items 40-43 constructed for present study. Item 44 adapted from Kelman and Lawrence, "Assignment of Responsibility in the Case of Lt. Calley: Preliminary Report on a National Survey," <u>Journal of Social Issues</u> , 28, 177-212.
45 - 50	Attitudes about U.S. policy in Vietnam (6-item scale, balanced to counteract agreement bias)	The Youth in Transition Project (see Johnston and Bachman, <u>op. cit.</u> ).
51 - 52	Attitudes about amnesty	Constructed for present study.
57	Perceived agreement with friends	Constructed for present study Items 54-56 adapted from Kelman and Lawrence, <u>op. cit.</u>
---PART D - Navy---		
1 - 8	Background measures	Adapted from current work within ISR.
9 - 25	Military experience	Constructed for present study.
26 - 32	Reasons for joining Navy	Constructed for present study.
33	Service number (optional)	Constructed for present study.
---PART D - Civilian---		
1 - 8	Background measures	Adapted from current work within ISR.
9 - 11	Job identification	Constructed for present study.
12 - 24	Military experience	Constructed for present study.

## Appendix C

THE DISTRIBUTION OF POSSIBLE SCORES  
WHICH THE GOAL INTEGRATION INDEX CAN HAVE

To what extent is the organization you work for effective in getting you to meet its needs and contribute to its effectiveness?

To what extent does the organization you work for do a good job meeting your needs as an individual?

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
	1	2	3	4	5
1	1.00	.75	.66	.63	.60
2	.75	2.00	1.65	1.50	1.40
3	.66	1.65	3.00	2.63	2.40
4	.63	1.50	2.63	4.00	3.60
5	.60	1.40	2.40	3.60	5.00

Appendix D

RACIAL COMPOSITION OF WORK GROUPS BY CATEGORIES

Racial Group Composition Categories	Stratum	Race of Majority in Work Group	Race of Supervisor	Race of Minority in Work Group	N
Race of respondent is the race of the majority in work group--supervisor same race	2 9 11	Non-White <sup>1</sup> White White	Non-White White White	Regardless Non-White White	67 795 1131
Race of respondent is the race of the majority in work group--supervisor different race	1 10 12	Non-White White White	White Non-White Non-White	Regardless Non-White White	29 41 104
Race of respondent is the race of the minority in work group--supervisor same race	4 6 7	White White Non-White	Non-White Non-White White	Black Other White	18 24 33
Race of respondent is the race of the minority in work group--supervisor different race	3 5 8	White White Non-White	White White Non-White	Black Other White	103 95 14

<sup>1</sup>Non-White respondents - A combined non-white racial work group consisting of Blacks and other non-whites

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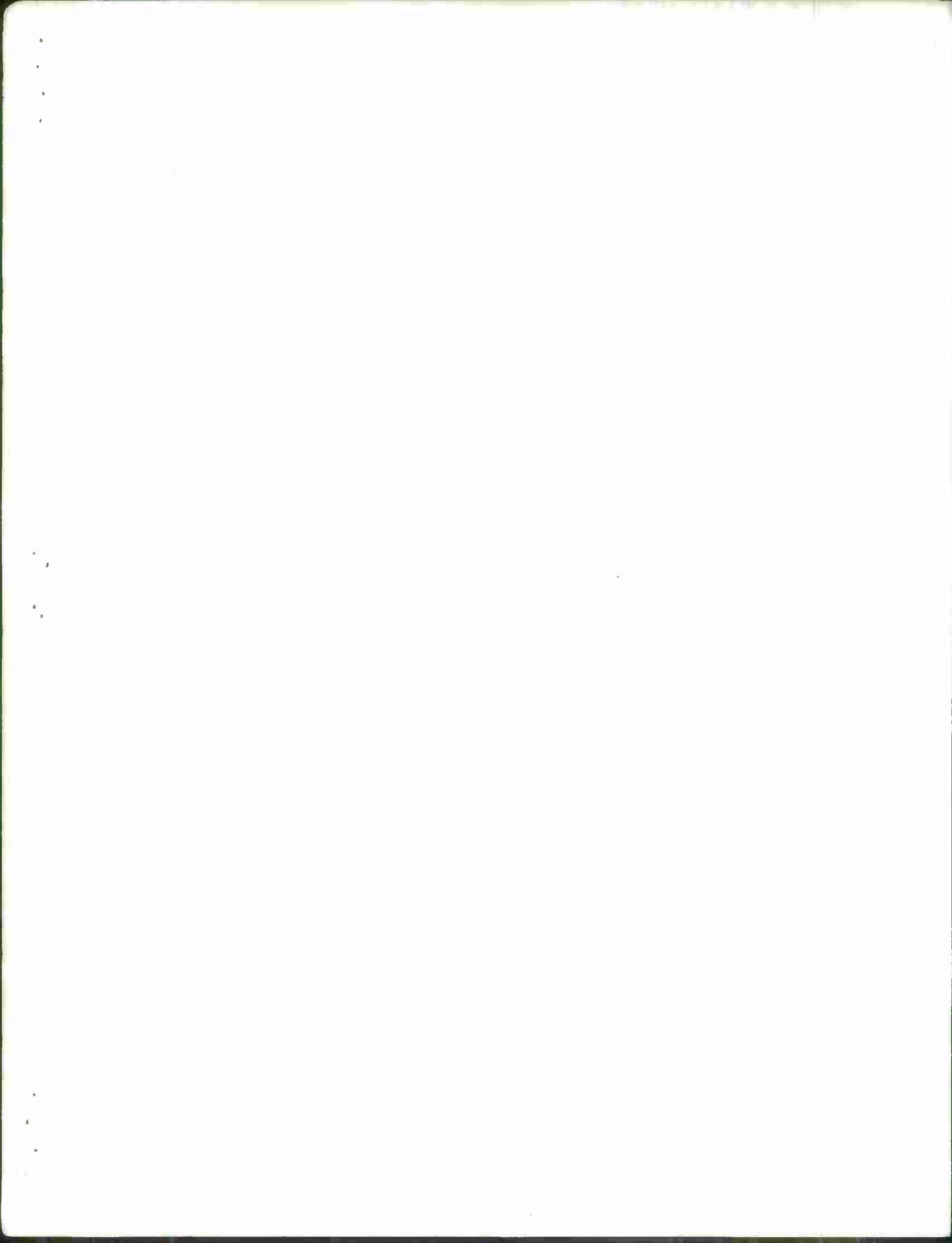
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